



SAMPLING IN THE FIELD

2017 ROUNDTABLES

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OFFICE OF CONSTRUCTION

FIELD SAMPLING: MIX, CORES, PATCHES, & TACK COAT



SAMPLE FREQUENCY: WHERE DO I FIND IT?

- Along with our specifications, the frequency guide can be found at:

www.roads.Maryland.gov

Business Center

Material Quality Resources

Publications



http://www.roads.maryland.gov/Index.aspx?Pa roads.maryland.gov

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Material Quality Resources

**Maryland State Highway Administration, Office of Mater
Technology**

OMT PUBLICATIONS

- Material Quality Assurance Processes, Details and Frequencies

AND USE OUR SPECIFICATIONS:

504 Asphalt Paving

505 Asphalt Patches

904 Performance Graded Binder and Asphalt Mixes

915 Production Plants

SAMPLING ASPHALT MATERIALS: MIX, CORES, PATCHES, TACK COAT

- Certified Technicians shall perform sampling for quality control, quality assurance, acceptance, split sampling, and verification.

SAMPLING ASPHALT MATERIALS: MIX, CORES, PATCHES, TACK COAT

- SHA witnesses the contractor sampling in the field, takes possession of samples and takes to the designated drop box for delivery to SHA Testing Laboratory.
- The contractor/producer submits quality control mix and core test results to the Engineer.

MIX SAMPLES

- Sample from behind the paver prior to compaction.
Documentation of random sampling shall be retained by the Engineer.
- Minimum area of mix sampling: 10'w x 100'l.
- One box sample (50 lbs) of asphalt mixture for every 1,000 tons per mix/per day for SHA QA and one for contractor's QC testing. Two boxes if over 1,000 tons.

A decorative graphic on the left side of the image, consisting of light blue lines and circles resembling a circuit board or network diagram, set against a teal gradient background.

BOX SAMPLE
CONTAMINATED WITH
DIRT AND DEBRIS. DO
NOT SEND TO THE LAB!



MIX SAMPLES

- SHA witnesses taking the contractor taking box samples, secures them with tape and adheres a label noting contract number, FMIS number and other identifying information.
- SHA delivers to designated drop box for testing.

Core Sampling

- Random core sampling locations will be selected for each 500 ton sub lot. A minimum of 5 cores to be taken for SHA QA and 5 for Producer's QC.
- If daily quantity is greater than 2500 tons, additional cores are required at a rate of 1 core each (SHA/Contractor) per 500 Tons (or fraction thereof).
- Sample the QC and QA cores in the presence of the Engineer.

CORE SAMPLING

- Cores should be secure and identified. A core sheet completed with contract number/FMIS number, etc. should accompany them to the drop box.

PATCHING

- Take three cores and corresponding gauge readings per mix/weekly to verify the gauge readings.
- One random sample per mix will be required daily for projects using more than 200 tons per day.

PATCHING

- 200 tons or less of asphalt per day may not require daily field sampling. However, one random sample per mix for every 1,000 tons of asphalt or one sample per mix will be required weekly; whichever yields the greater frequency.

CORES: LESS THAN 200 TONS IN ONE AREA

Asphalt Paving- Cores:

- i. Density cores will be waived for entrances and gore areas
- ii. Density cores may be waived on small quantities, 200 tons or less, except for mainline, ramp, and intersection paving. Gauge readings must be performed as per Category 505.
- iii. Daily quantities greater than 200 tons may be considered small tonnage if accumulated through non-continuous paving. For example, multiple lane pulls, bridge approaches, widening areas, turn lanes, entrances, gore areas.

MIX SAMPLING: LESS THAN 200 TONS IN ONE AREA

Asphalt Paving-Sampling:

- i. Quantities of 200 tons or less of Asphalt production will not require random field mix samples unless otherwise directed by the Engineer.
- ii. Random field mix samples must be taken from behind the paver and must not be taken from areas of bridge approaches, entrances, gore areas, hand-work, Gradall placed material, paver hoppers, and ends of paver augers.

OVER 200 TONS IN ONE AREA

- 5 Cores / 2500 Tons for SHA
- 5 Cores / 2500 Tons for Contractor
- 1 Box Sample / 1000 Tons for SHA
- 1 Box Sample / 1000 Tons for Contractor

Don't forget the OOC 90

SAMPLING TACK COAT

- One Tack Coat sample per project (minimum)
- Fill a gallon jug supplied by Producer until a small amount of space remains.
- Squeeze container to fill to the top. Place cap on jug and tighten.
- After filling: clean jug and identify sample (do not write on the lid).

STATE OF MARYLAND
STATE HIGHWAY ADMINISTRATION
MATERIALS AND TECHNOLOGY

GENERAL MATERIALS SAMPLE

Original ++
Acceptance _____
I.A.S.T. _____
Other _____

Date Sampled: 3/8/12 Lab No: 212017 Project Sample No: Start-up
Type of Material: CRS-1 Quantity Represented: 1700 gal
Contract No: WO 220 B 51 F.A.P. No: _____
Item No: _____ Type of Construction: TACK coat for HMA mixes
Sample Taken From: Truck #908 Plant No: #181 & #185 Source: _____ Job Site: _____
Produced By: Hammaker East, LTD Trade Name: Hammaker
Source of Supply: George E Lynch Dover De
Shipped From: 3450 Asintic Ave. Balt. Md. 21226 Lot No: 3-12 Tank No: 17
Size of Sample: 1/2 gal Sampled By: Obed Delgado Witnessed By: R.D. Vincent #787
Remarks: TAG # 113243
Return Original Form To: FAA Regional Laboratory



3450 Asiatic Ave.
Baltimore, Md, 21226

Phone: 410-355-6363
Fax: 410-355-6364

Certificate of Analysis

Grade: CRS-1 Lot: 3-12 Tank: 17 Lot Gal: 29,000

Residue From Distillation: 63.3

Penetration, 77°F, 100g., 5 Sec 1

Ductility, 4C or 25C, 5cm/minute, cm 1

Softening Point, Ring & Ball, Degrees C, (vendor Results) 1

Elastic Recovery @ 10°C AASHTO T301 1

Viscosity, SSF @ 122°F 29

Deumisibility, 35 ml 0.8% sodium dioctyl sulfosuccinate, % 1

Classification Test Pass

Storage Stability, 24 hr, % 100%

Particle Charge P05

Sieve Test, % 02

Oil Distillate, by volume of emulsion, % Trace

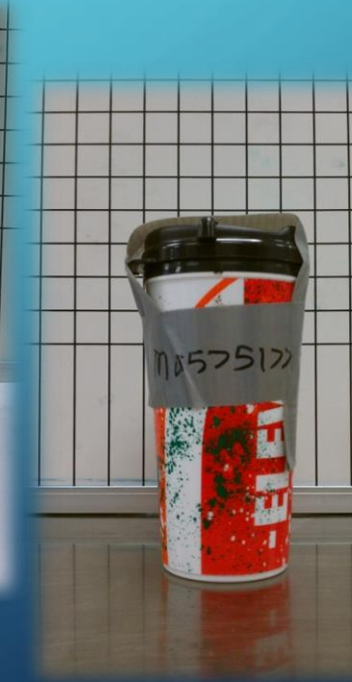
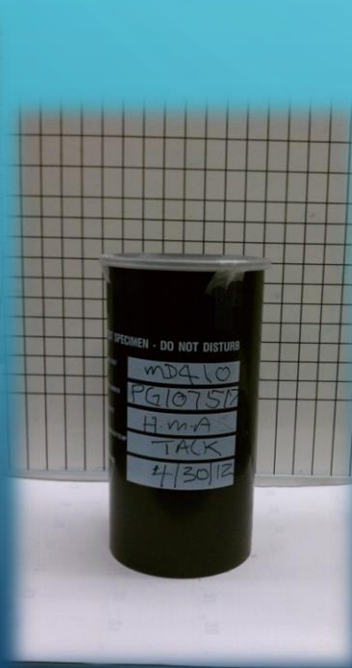
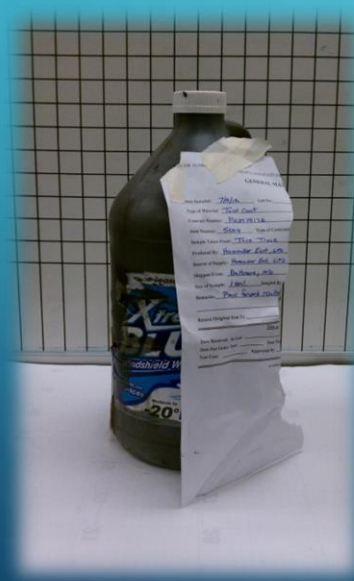
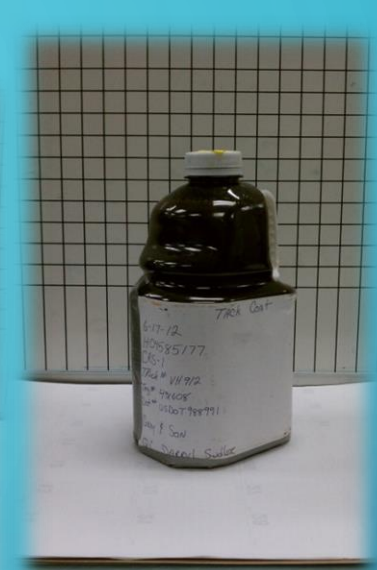
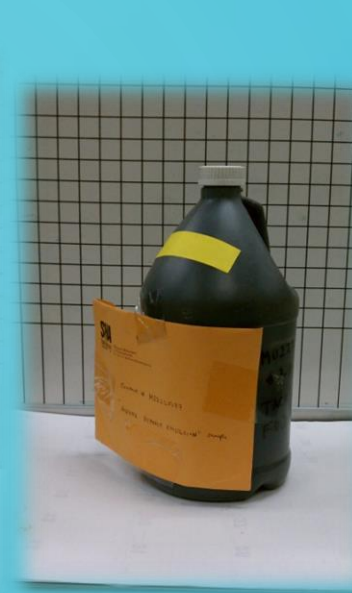
This Certificate Of Analysis exclusively certifies material manufactured and stored on location at Hammaker East - Baltimore plant. Third party distribution of this certification is unauthorized as Hammaker East claims no liability for material received through third party brokers. The referenced material is certified to meet DC, DE, MD, PA, VA, and WV D.O.T. Specifications.

Refinery Representative K. H. [Signature] Date 2-22-12

**This is the proper sample container
for Tack Coat.
Also, the only one that the Lab will
accept.**



NOT
THESE!!



ANY QUESTIONS?

Thank You.....

